

Question Q217

National Group: Singapore

Title: The patentability criterion of inventive step /
non-obviousness

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Reporter within

Working Committee: [please insert name]

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Questions

I. Analysis of current law and case law

The Groups are invited to answer the following questions under their national laws:

Level of inventive step / non-obviousness

1. What is the standard for inventive step / non-obviousness in your jurisdiction?
How is it defined?

An invention must be something that represents an improvement over any existing product or process that is already available. The improvement must be non-obvious to a person who is skilled in the art in that technological field of the invention. If an invention is new yet obvious to a person skilled in the art, the invention would not fulfill the inventive step requirement.

The inquiry for inventive step / non-obviousness involves two steps and is defined as follows:-

- (1) Construct the relevant state of the art for the invention in question.

(2) Compare the invention with the state of the art to determine if the invention is obvious to the person skilled in the art.

(See Ng-Loy Wee Loon in *Law of Intellectual Property of Singapore* (Sweet & Maxwell Asia, Rev Ed, 2009) at para 30.1.41.)

2. Has the standard changed in the last 20 years? Has the standard evolved with the technical / industrial evolution of your jurisdiction?

No.

3. Does your patent-granting authority publish examination guidelines on inventive step / non-obviousness? If yes, how useful and effective are the guidelines?

Yes. The examination guidelines are comprehensive enough as a reference to assist our appointed Examiners in the course of performing search and examination on our patent applications, patents in the re-examination or post grant search and examination. The guide also provides an insight into the current Singapore cases.

4. Does the standard for inventive step / non-obviousness differ during examination versus during litigation or invalidity proceedings?

No.

Construction of claims and interpretation of prior art

5. How are the claims construed in your jurisdiction? Are they read literally, or as would be understood by a person skilled in the art?

Singapore courts have consistently endorsed adopting a “purposive construction” of patent claims so as to determine the essential features of any particular invention. This approach is most recently endorsed in *Mühlbauer AG v Manufacturing Integration Technology Ltd* [2010] 2 SLR 724 at [22]. See also decision in *First Currency Choice Pte Ltd v Main-Line Corporate Holdings Ltd* [2008] 1 SLR(R) 335 at [25].

Claims are to be understood by the person skilled in the art as in *First Currency Choice* ([28] *supra*).

6. Is it possible to read embodiments from the body of the specification into the claims?

In ascertaining the true construction of a patent specification, the claims themselves are the principal determinant, while the description and other parts of the specification may assist in the construction of the claims. See *First Currency Choice* (*supra* at [23]).

As the necessary background of the words used in the claims may be affected or defined by what is said in the body of the patent specification, the claims should not be viewed independently, but should instead be construed as part of the whole specification. However, it is not permissible to put a gloss on or expand the claims by relying on a statement in the specification. If the claims have a plain meaning, then reliance ought not to be placed on the language used in the body of the specification so as to make them mean something different. Claims must be read and given their ordinary and natural meaning without incorporating extracts from the body of the specification into them. See *First Currency Choice* (*supra* at [24]).

7. How is the prior art interpreted? Is it read literally or interpreted as would be understood by a person skilled in the art? Is reliance on inherent disclosures (aspects of the prior art that are not explicitly mentioned but would be understood to be present by a person skilled in the art) permitted?

Prior art is interpreted as would be understood by a person skilled in the art. Prior publication must “not only identify the subject matter of the claim in the later patent” but must also be an “enabling disclosure” (at *Genelabs Diagnostics Pte Ltd v Institute Pasteur* [2001] 1SLR 121 at [24]). This means that an invention “would be anticipated by a piece of prior art if the teachings disclosed in this prior art are sufficiently clear and complete to allow the skilled addressee to make the invention” (see *Ng-Loy Wee Loon* in *Law of Intellectual Property of Singapore* (Sweet & Maxwell Asia, Rev Ed, 2009) at para 30.1.38. In view of the foregoing, one can say that reliance on inherent disclosures, as understood by a person skilled in the art, would be permitted.

8. Do the answers to any of the questions above differ during examination versus during litigation?

No.

Combination or modification of prior art

9. Is it proper in your jurisdiction to find lack of inventive step or obviousness over a single prior art reference? If yes, and assuming the claim is novel over the prior art reference, what is required to provide the missing teaching(s)? Is argument sufficient? Is the level of the common general knowledge an issue to be considered?

Yes, it is proper to find lack of inventive step or obviousness over a single prior art reference. An obviousness inquiry may allow for less emphasis or weight to be given to a single prior art as compared to a novelty inquiry. In most circumstances, providing argument to a lack of inventive step or obviousness issue is sufficient.

The Patent Office could assert that the missing teachings are part of the common general knowledge as viewed by a skilled addressee.

The reference to “common general knowledge” in an obviousness inquiry is that the skilled addressee is only a ‘diligent researcher’ and he does not need to consider a piece of prior art which he does not know of and was not likely to know of or pay attention to. The effect of this is to exclude certain prior disclosures or uses so that it makes the obviousness inquiry a more realistic one from the perspective of the unimaginative addressee. However, the provision in the Singapore Patents Act, Section 15, provides that the definition of “state of the art” for the obviousness assessment to be the same as that for the novelty inquiry (except unpublished patent applications with earlier priority dates). For the purpose of novelty inquiry, a prior use or a disclosure which has been made available to the public is a relevant piece of prior art, even if its availability was not known to the skilled addressee. According to Section 15, such disclosure must also be relevant in the obviousness inquiry. Therefore, for the skilled addressee to disregard this prior disclosure on the basis that as a mere “diligent researcher”, he would not have known of its availability, is inconsistent with the definition of “state of the art”. ((See Ng-Loy Wee Loon in *Law of Intellectual Property of Singapore* (Sweet & Maxwell Asia, Rev Ed, 2009) at paras 30.1.46 and 30.1.47.)

This difficulty in defining “common general knowledge” and “state of the art” was acknowledged in the *Court of Appeal in First Currency Choice Ltd vs Main-Line Corporate Holdings Ltd*.

This is resolved in that all uses or disclosures (other than an unpublished patent application with an earlier priority date) that have been made available to the public are to be treated as relevant prior art for the obviousness inquiry. See *Court of Appeal in First Currency Choice Ltd vs Main-Line Corporate Holdings Ltd* at [38] – [41] of the judgement.

10. What is required to combine two or more prior art references? Is an explicit teaching or motivation to combine required?

It is permissible to combine two or more prior art references in the obviousness inquiry, provided that it is obvious to the skilled addressee, while assessing the whole of the state of the art relevant to an invention, that he should include different pieces of prior art references.

Combining prior art references is not permissible unless it is an explicit teaching, where one of these teachings directs the skilled addressee to study the other teaching. See *Institut Pasteur & Anor v Genelabs Diagnostics & Anor*.

11. When two or more prior art references are combined, how relevant is the closeness of the technical field to what is being claimed? How relevant is the problem the inventor of the claim in question was trying to solve?

When two or more prior art references are combined, which is also known as “mosaicing”, is done by drawing essential integers of an invention from various prior art references and combine them to form a hybrid that is equivalent or closely identical to what is being claimed. See *Institut Pasteur & Anor v Genelabs Diagnostics & Anor*.

12. Is it permitted in your jurisdiction to combine more than two references to show lack of inventive step or obviousness? Is the standard different from when only two references are combined?

Yes, it is permitted in Singapore to combined more than two references to show lack of inventive step or obviousness. The standard is the same when only two references are combined. Combination of two or more references permissible provided it is obvious to the skilled addresses to do so. See reply to question 10.

13. Do the answers to any of the questions above differ during examination versus during litigation?

No.

Technical Problem

14. What role, if any, does the technical problem to be solved play in determining inventive step or non-obviousness?

Identifying the technical problem to be solved may be part of identification of inventive concept.

15. To what degree, if any, must the technical problem be disclosed or identified in the specification?

Nil

Advantageous effects

16. What role, if any, do advantageous effects play in determining inventive step or non-obviousness?

According to UK Manual of Patent Practice at 3.82, “where a variation from published matter proposed by the applicant has no advantages, or is even disadvantageous, although it can be argued that the resulting inferior procedure is not obvious in the sense that no skilled man would regard it as obvious to do something inferior, the application should nevertheless, if the variation is one whose possibility a skilled man would appreciate, be refused on the ground that there is no inventive step. Such a view was taken by the Technical Board of Appeal of the EPO in Decision T119/82, OJEPO 5/84, see particularly paragraph 16. The position is of course different if the applicant has discovered that a variation thought to be disadvantageous is in fact not so, or if from a large number of variants which would have been regarded as no more than feasible alternatives with no advantages, the applicant has selected a variant with an unexpected advantage.

17. Must the advantageous effects be disclosed in the as-filed specification?

The advantage relied upon to justify a selection invention should be clearly disclosed in the specification at the time of filing if it would not otherwise be apparent to a person skilled in the art. See UK Manual of Patent Practice at 3.91.

18. Is it possible to have later-submitted data considered by the Examiner?
19. How “real” must the advantageous effects be? Are paper or hypothetical examples sufficient?
20. Do the answers to any of the questions above differ during examination versus during litigation?

Teaching away

21. Does your jurisdiction recognize teaching away as a factor in favor of inventive step / non-obviousness? Must the teaching be explicit?

An invention may be regarded as non-obvious if it goes against the generally accepted views and practices in the art. See UK Manual of Patent Practice at 3.97.

22. Among the other factors supporting inventive step / non-obviousness, how important is teaching away?

Equally important.

23. Is there any difference in how teaching away is applied during examination versus in litigation?

No.

Secondary considerations

24. Are secondary considerations recognized in your jurisdiction?
Yes
25. If yes, what are the accepted secondary considerations? How and to what degree must they be proven? Is a close connection between the *claimed* invention and the secondary considerations required?

a. Workshop variation of existing prior art

Workshop improvements are insufficient to establish inventiveness. See *ASM Assembly Automation Ltd v Aurigin Technology Pte Ltd* and others [2010] 1 SLR 1 at [55].

b. Commercial success

Commercial success enjoyed by the patented invention may be considered, but is not conclusive of the inventiveness of the invention. Commercial success may be a relevant factor if the patented invention meets a long-felt need in the industry and, if the invention was obvious, why was it not done before? See *Hallen Co v Brabantia (UK) Ltd* [1989] RPC 307 at 323. This commercial factor was applied by the Court of Appeal in *FE Global Electronics Pte Ltd v Trek Technology (Singapore) Pte Ltd* [2006] 1 SLR 874 at [47]. However, the patentee must convince the tribunal that the commercial success of the patented invention is credited to the invention itself, and not because of other factors such as clever advertising gimmicks. See *Ng Kok Cheng v Chua Say Tiong* [2001] 2 SLR(R) 326 at [44].

c. So obvious – that the invention would at once occur to anyone acquainted with the subject, and desirous of accomplishing the end. See *First Currency Choice* at [45]

26. Do the answers to any of the questions above differ during examination versus during litigation?

No

Other considerations

27. In addition to the subjects discussed in questions 4 - 26 above, are there other issues, tests, or factors that are taken into consideration in determining inventive step / non-obviousness in your jurisdiction?
If yes, please describe these issues, tests, or factors.

- a. Lying in the road
- b. Why was it not done before?
- c. Fulfilling a need
- d. Advantages of the invention
- e. Obvious to try

(Extracted from IPOS' Guide on Patentability Issues arising during Search & Examination which cites Chapter 3 of the UK Manual of Patent Practice.)

Test

28. What is the specific statement of the test for inventive step/non-obviousness in your jurisdiction? Is there jurisprudence or other authoritative literature interpreting the meaning of such test and, if so, provide a brief summary of such interpretation.

Singapore courts have adopted the so-called four-step test based on the English Court of Appeal decision of *Windsurfing International Inc v Tabur Marine (Great Britain) Ltd* [1985] RPC 59 ("the *Windsurfing test*") as a structured approach to resolving what would be an otherwise vague inquiry. The *Windsurfing test* may be formulated as follows:

- (a) Identify the inventive concept embodied in the patent in suit.
- (b) The court then assumes the mantle of the normally skilled but unimaginative addressee in the art at the priority date, imputing to him what was, at that date, common general knowledge in the art in question.
- (c) Identify what, if any, differences exist between the matter cited as being "known or used" and the alleged invention.
- (d) The court then asks itself the question whether, viewed without any knowledge of the alleged invention, those differences constitute steps which would have been obvious to the skilled man or whether they require any degree of invention.

The above test has been criticized, but it is generally been observed that it provides a useful and structured approach to inventive step. Bearing in mind however, the criticisms, it has been suggested that a practical balance to this test would be desirable.

*Be that as it may, simplicity is certainly to be appreciated, and, in assessing the obviousness of an alleged invention, it may sometimes suffice in straightforward cases to refer to the test formulated by Lord Herschell in *Vickers, Sons And Co, Limited v Siddell* (1890) 7 RPC 292, where he stated (at 304) that an invention lacked an **inventive step** if what was claimed was 'so obvious that it would at once occur to anyone acquainted with the subject, and desirous of accomplishing the end'. Quite often, it is difficult, in practice, to break down the *Windsurfing test* ... into its component parts. Thus, while the *Windsurfing test* remains a useful guide, it is no more than that. Above all, it should be borne in mind that the *Windsurfing test* is merely a manifestation of judicial inventiveness on how best to pragmatically interpret and elucidate the requirements of s 15 of the Act.*

(see *First Currency Choice Pte Ltd v Main-Line Corporate Holdings Ltd* [2008] 1 SLR(R) 335)]

29. Does such test differ during examination versus during litigation?

No.

Patent granting authorities versus courts

30. If there are areas not already described above where the approach to inventive step / non-obviousness taken during examination diverges from that taken by courts, please describe these areas.

N.A.

31. Is divergence in approach to inventive step / non-obviousness between the courts and the patent granting authority in your jurisdiction problematic?

N.A.

Regional and national patent granting authorities

32. If you have two patent granting authorities covering your jurisdiction, do they diverge in their approach to inventive step / non-obviousness?

N.A.

33. If yes, is this problematic?

N.A.

II. Proposals for harmonization

The Groups are invited to put forward proposals for the adoption of harmonised rules in relation to the patentability criteria for inventive step / non-obviousness. More specifically, the Groups are invited to answer the following questions without regard to their national laws:

34. Is harmonization of inventive step / non-obviousness desirable?

35. Is it possible to find a standard for inventive step / non-obviousness that would be universally acceptable?

36. Please propose a definition for inventive step / non-obviousness that you would consider to be broadly acceptable.
37. Please propose an approach to the application of this definition that could be used by examiners and by courts in determining inventive step / non-obviousness.

The Singapore Group is in favour of harmonisation, but we recognise that it may be difficult to reconcile a test or definition which is broadly acceptable to all countries. Specifying how inventive step is to be judged could also be unduly restrictive, as this may change with the times and according to the technology involved.

Summary

The Singapore courts have adopted the Windsurfing test derived from UK in assessing inventive step. This has provided a structured approach to the question, although it is difficult to apply at times, and it has been suggested that it should only represent a guide. Mosaicing of documents is acceptable in determining inventive step in Singapore. We have also certain criteria or considerations for assessing inventive step, which provide some assistance in determining whether there is inventive step.

Note: It will be helpful and appreciated if the Groups follow the order of the questions in their Reports and use the questions and numbers for each answer. If possible type your answers in a different colour. Thank you for your assistance.